



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/524,593 | 02/15/2005 | Kazuhiko Ikeuchi | 2005_0128A | 8828 |

52349 7590 09/14/2006

WENDEROTH, LIND & PONACK L.L.P.
2033 K. STREET, NW
SUITE 800
WASHINGTON, DC 20006

EXAMINER

WEEKES, LLOYD

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/524,593 | Applicant(s) IKEUCHI, KAZUHIKO | |
| | Examiner Lloyd Weekes | Art Unit 2631 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20050215</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2631

This Office Action is in response to the application filed on February 15, 2005.

Claims 1-13 will be addressed below.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "8" and "9" have both been used to designate "curved portions of the sound opening". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "8" has been used to designate both "the line of the opening" and "the curved portion of the opening". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

Art Unit: 2631

include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites the limitation "the sound opening includes a line", and it is unclear as to what this line is. The word 'include' implies that the line is within the opening, which opposes the meaning of opening; or is it being implied that there is a line, which divides the opening? If so this is not shown in the drawings. Further clarification is required. "The sound opening includes a line" will be interpreted as "the sound opening has an edge".

6. Claims 2-13 depend on claim 1.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Grasso (US Patent 5619585).

Claim 1: Grasso discloses a speaker grille (Fig. 3 item 16) provided with a sound opening (Fig. 7), the speaker grille being fixed at a fixing portion (leg support, Fig 7 item 24) item on the outer circumference (circumference which includes the leg supports) and disposed in front of a speaker comprising a diaphragm including an edge portion (Fig 3 item 30), the speaker reproducing sounds of 1 kHz and higher (column 1 lines 14-15);

wherein the speaker grille is provided with a reinforcement rib (Fig 7 item 20, Fig 3) opposing to a central part of the speaker, and

the sound opening includes a line (Fig 7 near items 26 and 24, edge of opening extending towards the inside of semicircular hole) opposing to a region extending from the edge portion of the diaphragm to the fixing portion on the outer circumference (column 3 lines 44-62).

Art Unit: 2631

Claim 2: Grasso discloses the speaker grille as in claim 1 above, wherein the sound opening includes a line (Fig 7 near items 26 and 24, edge of opening extending towards the inside of semicircular hole) opposing to the outer circumference of the edge portion of the diaphragm (Fig 4, column 1 lines 58-62).

Claim 3: Grasso discloses the speaker grille of claim 1, wherein the speaker is provided with one of a round vibration plane and an oval vibration plane (Fig 3 item 30), the sound opening includes an arc-shape curve in parallel (Fig 7) with the fixing portion (leg support, Fig 7 item 24) on the outer circumference (circumference which includes the leg supports).

Claim 4: Grasso discloses the speaker grille of claim 1, wherein the sound opening is one of a plurality of sound openings the reinforcement rib (Fig 7 item 20) has a portion for separating the sound openings (Fig 7).

9. Claims 1, 8, 9, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Koike (US Patent 4670868).

10. Koike discloses a speaker grille as in claim 1: a speaker grille provided with a sound opening (Fig. 1 item 33), the speaker grille being fixed at a fixing portion on the outer circumference and disposed in front of a speaker comprising a diaphragm

including an edge portion (Fig 2 item 32), the speaker reproducing sounds of 1 kHz and higher (column 1 lines 65-68); wherein the speaker grille is provided with a reinforcement rib opposing to a central part of the speaker (Fig 1 item 33 and Fig 2 item 32), and the sound opening includes a line opposing to a region extending from the edge portion of the diaphragm to the fixing portion on the outer circumference (column 3 lines 60-62).

Claim 8: Koike discloses a speaker grille as in claim 1 above, wherein the speaker is provided with a vibration plane of an oblong round shape, the sound opening is one of a plurality of sound openings, the reinforcement rib has portions for separating the sound openings in a direction of a shorter side of the vibration plane (Fig 1 and Fig 2).

Claim 9: Koike discloses a speaker grille as in claim 8 above, the grille further provided with a block portion for blocking a central portion of the vibration plane at the middle with respect to a longer side of the vibration plane (Fig 1, item 33).

Claim 11: Koike discloses a speaker grille as in claim 1 above, wherein the speaker is provided with a vibration plane of an oblong round shape (Fig 1 and Fig 2), the sound opening is one of two sound openings (Fig 1, left half and right half), the reinforcement rib has a first portion (center rib) extending in a direction of a longer side of the vibration plane and disposed at the middle with respect to the direction of the shorter

Art Unit: 2631

side of the vibration plane, the first portion separating the two sound openings in a direction of a shorter side of the vibration plane (Fig 1).

Claim 12: Koike discloses a speaker grille as in claim 11 above wherein the reinforcement rib further has second portions in the direction of the shorter side of the vibration plane for further splitting each of the two sound openings (Fig 1).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 5, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grasso (US Patent 5619585) in view of Moner, Jr. et al. (US Patent 5565659).

Claim 5: Grasso discloses a speaker grille as in claim 1 above, in which the speaker has a round vibration plane, but he does not disclose that the sound openings of the grille are at least 31% and less than 60% of the projected area of the vibration plane. However, Manor in designing his speaker grille cover, discloses that the open area of the sound openings should be in the range of 40-50% (column 2 lines 35-38). Since Grasso is desirous of having sound received as clearly as possible from his sound

Art Unit: 2631

emitting device, it would have been obvious to one of ordinary skill in the art at that time, to use a grille that provided an open area within this range in Grasso's invention because as Manor states, in this range minimum distortion of the transmitted speaker sound occurs (column 2 lines 35-38).

Claims 6 and 7: Grasso discloses a speaker grille as in claim 1 above, in which the speaker has a round vibration plane; he does not disclose that the vibration plane of the speaker is of oblong round shape, neither does he disclose that the effective open area of the sound openings is in the range of at least 22% and less than 60% nor in the range of at least 48% and less than 60% of the projected vibration plane. However, Manor in designing his speaker grille cover, discloses that the open area of the sound openings should be in the range of 40-50% (column 2 lines 35-38). Since Grasso is desirous of having sound received as clearly as possible from his sound emitting device, it would have been obvious to one of ordinary skill in the art at the time of Grasso's invention, to use a grille whose open area was within the range of 40-50%, regardless of the shape of the speaker as cited by Manor, so as to minimize the distortion of the speaker sound (column 2 lines 35-38).

13. Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koike (US Patent 4670868).

Art Unit: 2631

14. Koike discloses the speaker grille as in claims 9 and 11 above but does not disclose that a magnet is on the surface of the first portion opposing to the vibration plane. However, it would have been obvious to one of ordinary skill in the art at the time of Koike's invention to place a magnet at the center of the first portion (center rib) facing the diaphragm so as to apply a downward force on the pickup to prevent it from moving when the device is off.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lester G. Stine (Design Patent 151,795) discloses a speaker grille, which could be used in a 102 rejection of claims 1-4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lloyd Weekes whose telephone number is 571-220-1067. The examiner can normally be reached on Mon-Thurs 9am -3:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on 571-220-1065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 2631

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lloyd Weekes
09/05/2006



James W. Myhre
Supervisory Patent Examiner